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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/504,782	02/15/2000	Masahiro Kume	0819-337	8307
22204	7590	11/14/2005	EXAMINER	
NIXON PEABODY, LLP 401 9TH STREET, NW SUITE 900 WASHINGTON, DC 20004-2128			FLORES RUIZ, DELMA R	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/504,782

Applicant(s)

KUME ET AL.

Examiner

Delma R. Flores Ruiz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 7-23 and 26-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 24 and 25 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In claims 24 and 25 recites: "an optical integrated unit comprising the semiconductor laser device of claim 1" this phrase does not feature any limitation is considered indefinite and unclear, since the resulting claim does not clearly set what is the function of optical integrated unit on the semiconductor laser device. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 3 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sverdlov (6,455,337) in view of Kimura Akitaka, et. al. (JP11008437).

Regarding claim 1, Sverdlov discloses in Figure 1 a semiconductor laser device (10) comprising; a first cladding (16) layer, which is made of n type +-GaN of a first conductivity type and is formed over a substrate (12); an active layer (20), which is made of $\text{In}_y \text{Ga}_{1-y}\text{N}$ and is formed over the first cladding layer (16), and a second cladding (24) layer, which is made of p type +-GaN of a second conductivity type and is formed over the active layer (20). Sverdlov discloses the claimed invention except for $\text{In}_y \text{Ga}_{1-y}\text{N}$ layer of the first conductivity type, wherein $0 < x < 1$, $0 < y < 1$ and $x \geq y$ in the composition of In. However, Kimura discloses in abstract, Paragraph 28, and also illustrated in Figure 2, the $\text{In}_y \text{Ga}_{1-y}\text{N}$ layer of the first conductivity type, wherein $0 < x < 1$, $0 < y < 1$ and $x \geq y$. Therefore, it would have been obvious to a person having ordinary skill in the art to combine the nitride compound semiconductor of Kimura with the semiconductor laser of Sverdlov because it would provide a nitride compound semiconductor with crystal growth approach for forming the nitride system compound semiconductor, Paragraph 1.

Regarding claim 2, Sverdlov discloses in Figure 1 a $\text{In}_x\text{Ga}_{1-x}\text{N}$ layer (14) and is, formed is formed in contact with the first cladding layer (16)

Regarding claim 3, Sverdlov discloses in Figure 1, $\text{In}_y \text{Ga}_{1-y}\text{N}$ layer (14) is formed in contact substrate (12).

Regarding claim 24, Sverdlov discloses in Figure 1, optical integrated unit.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4 – 6 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimura Akitaka, et. al. (JP11008437).

Regarding claim 4, Kimura discloses in Figure 1, a semiconductor laser device comprising; a first cladding (105), which is made of n-type $\text{Al}_{0.15}\text{Ga}_{0.85}\text{N}$ of a first conductivity type and is formed over a substrate (101); an active layer (107), which is made of $\text{In}_y\text{Ga}_{1-y}\text{N}$ layer and is formed over the first cladding layer (105); and a second cladding (110) layer, which is made of p-type $\text{Al}_{0.15}\text{Ga}_{0.85}\text{N}$ of a second conductivity type and is formed over the active layer (107); an electrode (112) formed over the second cladding layer (110); and an $\text{In}_y\text{Ga}_{1-y}\text{N}$ layer (111) of the second conductivity type is

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formed between the second cladding (110) and the electrode (112) wherein $0 < x < 1$, $0 < y < 1$ and $x \geq y$ in the composition of In.

Regarding claims 5 and 6, Kimura discloses in Figure 1, $\text{In}_y\text{Ga}_{1-y}\text{N}$ layer (111) is formed in contact with second cladding layer (110) and electrode (112).

Regarding claim 25, Kimura discloses in Figure 1, optical integrated unit.

Response to Amendment

Applicant's arguments with respect to claims 1 – 6, and 24 – 25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (571) 272-1940. The examiner can normally be reached on M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on (571) -272-1835. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Delma R. Flores Ruiz
Examiner

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DRFR/MH

October 31, 2005



Min Sun Harvey
Supervisor Patent Examiner
Art Unit 2828